



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/592,761	06/13/2000	Takahisa Ueda	UEDA3004/FJD	8831
23364 7590 02/16/2012 BACON & THOMAS, PLLC 625 SLATERS LANE FOURTH FLOOR ALEXANDRIA, VA 22314-1176				
EXAMINER				
FOSTER, NICHOLAS L				
ART UNIT		PAPER NUMBER		
3674				
MAIL DATE		DELIVERY MODE		
02/16/2012		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/592,761

Applicant(s)

UEDA ET AL.

Examiner

NICHOLAS L. FOSTER

Art Unit

3674

Period for Reply -- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2011.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ An election was made by the applicant in response to a restriction requirement set forth during the interview on ____; the restriction requirement and election have been incorporated into this action.
- 4) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 5) ☒ Claim(s) 1-10 is/are pending in the application.
- 5a) Of the above claim(s) 1-3, 5-9, 10/1-3, and 10/5-9 is/are withdrawn from consideration.
- 6) ☐ Claim(s) ____ is/are allowed.
- 7) ☒ Claim(s) 4 and 10/4 is/are rejected.
- 8) ☐ Claim(s) ____ is/are objected to.
- 9) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 10) ☒ The specification is objected to by the Examiner.
- 11) ☒ The drawing(s) filed on 13 June 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 12) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____
- Paper No./Mail Date ____

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of Species IX in the reply filed on 11 October 2011 is acknowledged. The traversal is on the ground(s) that the species do not amount to different inventions. This is not found persuasive because the species disclosed in the present application lack unity of invention. Specifically the special technical feature which appears to be the shape of the packing gland (which is different in each species), as the only other technical features the embodiments have in common with each other (e.g. a spiral wound expanded graphite gland, ring like seal members, and a projected part, etc...) are all disclosed in prior art and thus, when considered as a whole, do not define a contribution over the prior art.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 1-3, 5-9, 10/1-3, and 10/5-9 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 11 October 2011.

Drawings

3. Figures 25-29 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application.

The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

4. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract **not exceed 150 words in length** since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

5. The abstract of the disclosure is objected to because it exceeds 150 words in length.

Correction is required. See MPEP § 608.01(b).

Claim Objections

6. **Claim 4** is objected to because of the following informalities:

"is" in line 3 should read "and is";

"outer" in line 5 should read "the outer";

"inner" in line 5 should read "the inner";

"the" in line 12 should read "an" as an outer face has not previously been claimed in claim 4.

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. **Claims 4 and 10/4 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.**

Claim 4 recites the transitional phrase “according wherein”. It is unclear whether this is meant to be an inclusive or exclusive transitional phrase. Appropriate clarification and correction is required. For examination purposes examiner assumes applicant intended the phrase to read “comprising”.

Claim 4 recites the limitation that “the outer face of said ring-like seal member...is position more outward in the axial direction as moving toward said ring-like projected part” in lines 12-16. It is unclear what the face is positioned more outward from. Additionally it is unclear from where the moving toward said ring-like projected part is occurring. Appropriate clarification and correction is required. For examination purposes examiner assumes applicant intended the limitation to read “the outer face of said ring-like seal member...extends inward in said axial direction when viewed in the direction from an inner end portion of said die mold packing part towards an outer end portion of said die mole packing part”.

Claim 4 recites the limitation “the projection end face” in line 16. There is insufficient antecedent basis for this limitation in the claim. Appropriate clarification and correction is required. For examination purposes examiner assumes applicant intended the limitation to read “an end face” as no end face of the ring-like projected part has been previously claimed.

Claim 4 recites the limitation “[an] end face...is substantially positioned in an extension plane of said oblique circular cone face” in lines 17-18. It is unclear what this means (e.g. is the end face positioned axially inside of an extension plane of said oblique circular cone face, is the end face positioned in an extension plane of said ring-like seal member, is the ring-like projected part substantially in an extension plane of said ring-like seal member, etc...). Appropriate clarification and correction is required. For examination purposes examiner assumes applicant intended the limitation to read “[an] end face...is substantially positioned axially inside of an extension plane of said oblique circular cone face”.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 4 and 10/4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Duer (US 3,179,426) in view of Tickmantel (US 4,892,320).

With regard to **claim 4**, Duer discloses a gland packing (as seen in Figures 1 and 2) comprising a ring-like projected part (i.e. when a member 24 is compressed, as seen in Figure 2, it extrudes at least partially past the member 26 as the member 26 has a smaller radius than the member 24 thus a ring like projected part is formed) which is projected outward in an axial direction (i.e. the left hand direction in Figures 1-2) and is formed on at least one end face in an axial direction of a packing part (24) and in at least one of the outer and the inner end portions in a radial direction (as seen in Figure 2), said packing part being configured of graphite (column 2, lines 1-3 discloses graphite impregnated asbestos) and in a ring-like shape (as seen in Figures 1-2), a ring-like seal member (26) is brought into tight contact with said one end face in the axial direction of said die mold packing part excluding said ring-like projected part (as seen in Figure 2), the outer face of said ring-like seal member is formed as an oblique circular cone face (as seen in Figure 2 and described in column 2, lines 4-6) which is positioned more outward in the axial direction as moving toward said ring-like projected part (i.e. it is angled in the axial direction as moving from the outer circumference of the packing to the inner circumference of the packing as seen in Figure 2) and the projection end face of said ring-like projected part is substantially positioned in an extension plane of said oblique circular cone face (as seen from Figures 1 and 2 the ring like projected part cannot project beyond an extension plane of the oblique circular cone face).

Duer fails to disclose that the packing part is die molded, however this is a product by process limitation which is given little patentable weight as it results in no structural difference. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Duer also fails to disclose that the packing part is configured by windingly laminating an expanded graphite tape into a spiral shape.

Tickmantel discloses a die molded packing part (4) configured by windingly laminating an expanded graphite tape into a spiral shape (column 3, lines 33-40).

It would have been considered obvious to one having ordinary skill in the art, at the time the invention was made, to have made the graphite packing part of Duer out of a windingly laminating expanded graphite tape in a spiral shape as disclosed in Duer with the expected result of not using a hazardous asbestos material while providing adequate sealing performance.

With regard to **claim 10/4**, the combination (Duer) discloses that said ring-like seal member is selected from a lamination of a sheet material having impermeability, a single plate, and metal foil (i.e. column 2, lines 45-47 disclose they are a thin sheet of metal which is a single plate, can be considered a metal foil, and is known in the art to be impermeable).

11. Claims 4 and 10/4, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Bryant (US 3,467,394) in view of Salesky et al. (US 5,201,532).

With regard to **claim 4**, Bryant discloses a gland packing (as seen in Figures 1-3) comprising a ring-like projected part (90 or 91) which is projected outward in an axial direction (i.e. down in Figures 1-3) and is formed on at least one end face in an axial direction of a packing part (66) and in at least one of the outer and the inner end portions in a radial direction (as seen in Figure 3), said packing part being configured in a ring-like shape (as seen in Figure 2), a ring-like seal member (65) is brought into tight contact with said one end face in the axial direction of

said die mold packing part excluding said ring-like projected part (as seen in Figure 3), the outer face of said ring-like seal member is formed as an oblique circular cone face (as seen in Figures 2-3 the outer face has two angled (i.e. conical) faces) which is positioned more outward in the axial direction as moving toward said ring-like projected part (as seen in Figure 2) and the projection end face of said ring-like projected part is substantially positioned in an extension plane of said oblique circular cone face (as seen from Figure 3 the ring like projected part does not project beyond an extension plane of the oblique circular cone face).

Bryant fails to disclose that the packing part is die molded, however this is a product by process limitation which is given little patentable weight as it results in no structural difference. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985).

Bryant also fails to disclose that the packing part is configured by windingly laminating an expanded graphite tape into a spiral shape.

Salesky discloses a die molded flexible non-planar packing part made from laminating sheets of graphite foil (i.e. tape) in layers into a ring shape (abstract and column 4, lines 40-46).

It would have been considered obvious to one having ordinary skill in the art, at the time the invention was made, to have made the packing part of Bryant a die molded flexible non-planar packing part made from laminating sheets of graphite foil in layers into a ring shape as disclosed in Salesky with the expected result of increased thermal performance of the packing. Additionally it would have been considered obvious to have made the packing part disclosed in Salesky out of a continuous piece of graphite foil spirally wound as this would provide the expected result of better bonding of the graphite foil and thus better sealing performance of the packing.

With regard to **claim 10/4**, the combination (Salesky) discloses that said ring-like seal member is selected from a lamination of a sheet material having impermeability, a single plate, and metal foil (i.e. column 4, lines 71-73 disclose they are metal which is known in the art to be impermeable and can be considered a metal foil, and as seen in which is a single plate, can be considered a metal foil, and is known in the art to be impermeable).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure and contains further examples of similarly shaped packings.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to NICHOLAS L. FOSTER whose telephone number is (571)270-5354. The examiner can normally be reached on M-F 9:00-5:30 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Beach can be reached on (571)272-6988. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/NICHOLAS L FOSTER/
Examiner, Art Unit 3674

**/Thomas A Beach/
Supervisory Patent Examiner, Art Unit 3674**